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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

QI, ZHI QIANG

ART UNIT	PAPER NUMBER
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2871

DATE MAILED: 08/30/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/783,286

Applicant(s)

BASTURK, NACI

Examiner

Mike Qi

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**.
- 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 8-12 is/are rejected.
- 7) ☒ Claim(s) 7 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.

- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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DETAILED ACTION

Drawings

1. Figures 1A, 2C, 3A, 3B, 4A, 4B, 5A, 5B should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 9 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 9, recitation "the digital part of the first display device has a comparable structure to that of the second display device" is not definite. Because it cannot tell what is the comparable structure, and it does not give any clear definition of the comparable structure. For examination purpose, it is interpreted as the first display device has a dial timepiece structure displaying time and the second display device has a panel structure displaying character information.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-6 and 8-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant admitted prior art.

Claim 1, Applicant admitted prior art (the specification of page 1, line 16 – page 5, line 2; Figs 1A and 2-5) a display assembly (1) comprising:

- two superposed display devices able to take two different states wherein one of the display device is visible to the exclusion of the other, and that was already known from EP patent 0926574; and that is a double structure, one structure being formed by a liquid crystal cell (26), and the liquid crystals being confined in a space delimited by two transparent substrates (30, 32) and having two switching states, the other structure being formed by a liquid crystal optical valve (28), and the liquid crystals being confined in a space delimited by two transparent substrates (31, 33) and having at least two switching states;
- control means (23 and 9) allowing an appropriate voltage to be selectively applied to the cell (26) and/or to all or part of the valve (28) to cause them to switch from one state to another;

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- a polariser (absorbent linear polariser 40) (as a first polariser) is arranged at the front of the display cell (26); a polariser (reflective polariser 44) (as a second polariser) is arranged at the back of the valve (28); so that when the cell is switched to display at least one item of data, the total or partial switching of the valve, from one state to another, inverts the contrast of the data display from a light appearance to a dark appearance or vice versa, as a function of the light or dark shade of the first display device (the cell 26);
- the reflective polariser (44) placed at the back of the second display device (the optical valve 28).

Applicant admitted prior art discloses all the limitations described in the claim 1. The structure of the display assembly having such double structures and having such contrast inversion to achieve the dial cooperates with an analogue display as the Applicant indicated that was already known in the art.

Therefore, it would have been obvious to those skilled in the art to arrange a two superposed contrast inversion display device having double structures as claimed in claim 1 for achieving the dial cooperates with an analogue display.

Claim 2, it is a basic principle for the liquid crystal display device to be switched from one state to another state, so that the liquid crystal display is to be made visible or not visible, and using a mirror mask such as a reflector or a black mask such as a light shielding layer to increase the contrast, and that would have been at least obvious.

Claim 3, the valve also is a liquid crystal display panel, and it is the basic principle to switch the liquid crystal panel with two opposite switching mode, so that

reference

reference

would be light display or dark display, that is two types of data of the second display being observed with a contrast inversion, and that would have been at least obvious.

Claim 4, Applicant admitted prior art discloses (page 2, lines 28 – 31; page 3, lines 16 – 27) that the cell (26) and the valve (28) using positive or negative anisotropy nematic liquid crystal would obtain same effect. Therefore, the liquid crystals of the display assembly (the cell and the valve) using positive or negative anisotropy, and may be identical or different in the cell and in the valve as claimed in claim 4 would have been at least obvious.

Claim 5, Applicant admitted prior art discloses (Figs.1A and 5) that the first display device has a dark shade (dark segment display) and the front polariser (40) of the second display device (the cell 26 and the valve 28) is an absorbent type polariser and the back polariser (44) is a reflective type polariser crossed with the front polariser (40).

Claim 6, it is a reverse version of a display, such as Applicant disclosed in Fig.3, in which the first display device has a light shade (light segment display) and that would reverse the arrangement to obtain a light color on a dark background. Therefore, it would have been at least an obvious variation for achieving a light color on a dark background display.

Claim 8, Applicant admitted prior art discloses (page 1, lines 29-31; Fig.1A) that the first display device is an analogue device such as hands (12,14,16) and dial (18).

Claim 9, Applicant admitted prior art discloses (Fig.1A) that the first display device has a dial timepiece structure displaying time and the second display device has a panel structure displaying character information, and that is a comparable structure.

Claim 10, Applicant admitted prior art discloses (Fig.1A) that the first display device such as the hands (12,14,16) and dial (18) essentially displaying time related data and the second display device (24) displaying time related data complementary to the preceding data or non time related data of sensor systems or processing systems such as alphanumerical, and integrated in a case of the timepiece.

Claim 11, Applicant admitted prior art discloses (page 1, lines 22 – 31; Fig.1A) that the first display device (22) includes a dial (18) above which move the hour, minute and second hands (12,14 and 16).

Claim 12, Applicant admitted prior art discloses (page 1, lines 34-35; Fig.1A) that the second display device (24) is formed of a sandwich type structure including crystal (20), so that the second display device is combined with crystal.

Allowable Subject Matter

6. Claim 7 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The prior art of record neither discloses nor teaches a display assembly comprising various elements, more specifically, as the following:

the transparent substrates opposite the cell and the valve are combined in a
single transparent substrate.

The closest references Applicant admitted prior art and EP 0930522, EP
0926574 disclose a display assembly having superposed double structure using
absorbent polariser and reflective polariser to obtain a contrast inversion display, but the
prior art of record do not disclose the display structure in which the transparent
substrates opposite the cell and the valve are combined in a single transparent
substrate as claimed.

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PRIMARY EXAMINER

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mike Qi whose telephone number is (703) 308-6213. The examiner can normally be reached on 349.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Sikes can be reached on (703) 308-4842. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7721 for regular communications and (703) 308-7721 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Mike Qi
August 5, 2002


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